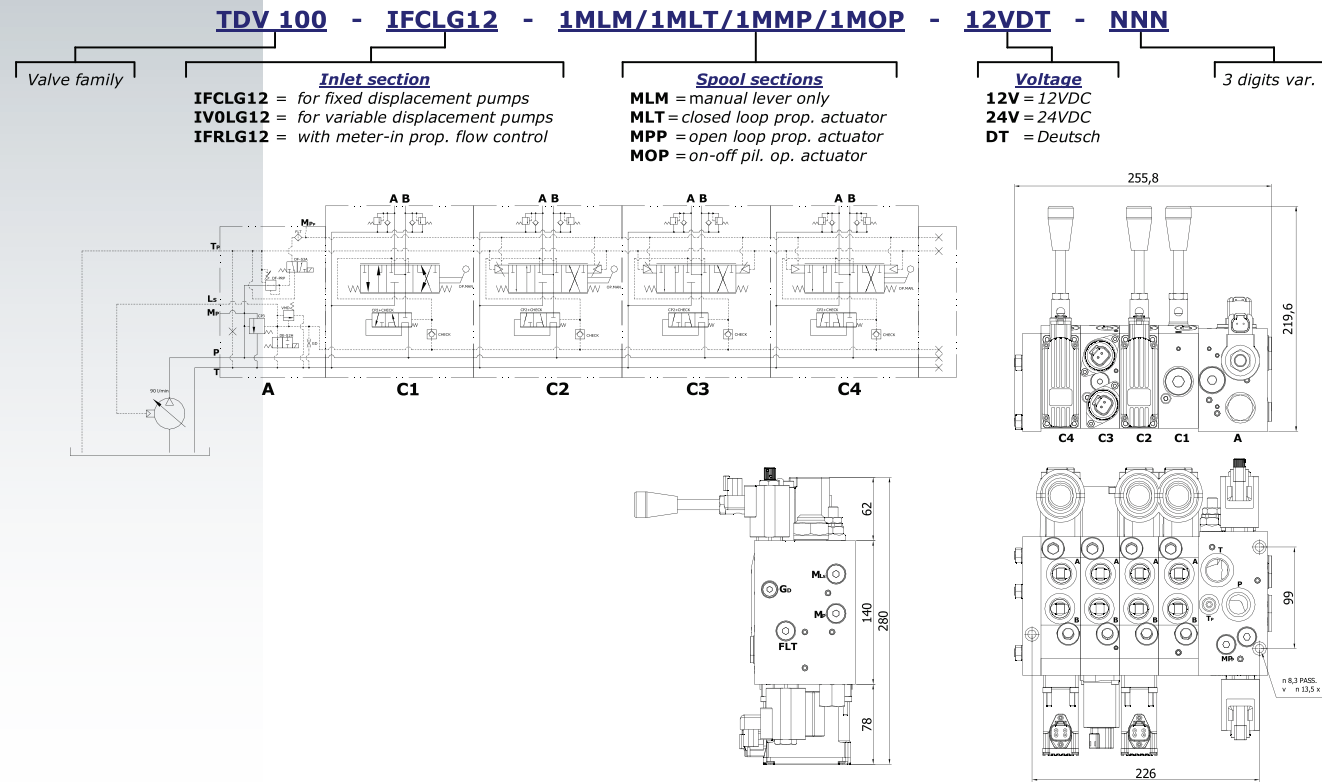


Sectional Valve Sections Assembly Options TDV 100 Series

Sectional valve designation



Hydraulic and electrical characteristics of operating parts

Mnemonic code	IFCL / IFVL	IFRLA/B	MLM	MLT	MPP	MOP
Part description	Inlet section	Inlet section	Spool section	Spool section	Spool section	Spool section
Hydraulic configuration	Fixed or variable displacement pump	Proportional meter-in ctrl of pump flow	Manual lever control	X/Y/K/S spool proportional actuator	X/Y/K/S spool proportional actuator	X/Y/K/S spool on-off actuator
Operating flow rate	90 l/min	90 l/min	20/40/60/80 l/min	20/40/60/80 l/min	20/40/60/80 l/min	20/40/60/80 l/min
Max. work pressure	280 bar	280 bar	280 bar	280 bar	280 bar	280 bar
Pressure compensator setting	15 bar @ 40 l/min	15 bar	13 bar	13 bar	13 bar	13 bar
Servo actuator pilot flow requirement	//	//	//	0,2 l/min	0,2 l/min	0,2 l/min
Servo actuator pressure requirement	//	//	//	15-18 bar	15-18 bar	15-18 bar
BSP (Gas) port threads	1/2" - 3/4"	1/2" - 3/4"	1/2"	1/2"	1/2"	1/2"
UNF port threads	1"1/16	1"1/16	7/8"	7/8"	7/8"	7/8"
Number of sections in the assembly	1	1	1-8	1-8	1-8	1-8
Electrical configuration	Electro-hydraulic	Proportional	Manual lever control	Closed loop ctrl with built-in electronics	Open loop proportional control	On-off pilot pressure control
Supply voltage	12-24 VDC	12-24 VDC	12-24 VDC	//	12-24 VDC	12-24 VDC
Max. current consumption	4A @ 12VDC	4A @ 12VDC	//	0,75A	1,5A	1,2A @ 12VDC
Analogical input impedance	//	//	//	< 40 Kohm	//	//
Analogical input signal	//	//	//	0,5<2,5<4,5V	//	//
Current command ctrl	//	0,4-1,5A/PWM dither:100Hz	//	//	0,2-1,5A/PWM dither:100Hz	//
Typical control potentiometer resistance	//	1-10 kOhm	//	1-10 kOhm	1-10 kOhm	//
DT04 pin connection #1	//	//	//	(+) power source	//	(+)12-24 VDC/coil A
DT04 pin connection #2	//	//	//	//	//	(-) ground
DT04 pin connection #3	//	//	//	Var. ctrl signal	//	(+)12-24 VDC/coil A
DT04 pin connection #4	//	//	//	(-) power source	//	(-) ground



TDV 100 DIRECTIONAL PROPORTIONAL CONTROL VALVE SYSTEM

Stackable Directional Control Valve System

The TDV100 is a closed center, load sensing, sectional control valve with pre-compensation.

The TDV100 can be configured with 1 to 10 working sections and can be used with fixed displacement or with pressure/flow compensated variable displacement pumps.

When multiple functions are selected, the TDV100 will automatically resolve the highest function load pressure which is then transmitted to the pump or inlet unloader/by-pass compensator and drained to tank once all spools are returned to neutral.

Each TDV100 sectional valve is crossed by a pilot pressure supply line and a return rail to feed 16-20 bar to the MULTIDROM* electro-hydraulic actuators system.

Manual and Electro-hydraulic Controls

MLM - Multi-function / Manual control lever

MLT - Multi-function / Manual control lever and MLT/FD5 feedback (closed loop) type electro-hydraulic proportional actuators

MPP - Multi-function / Double-sided proportional non feedback (open loop) pilot pressure control actuators with screw type manual overrides

MOP - Multi-function / Manual control lever and ON-OFF actuators

SPO - Single function ON-OFF selection with pressure compensated 3-way proportional meter-in control of pump flow with manual overrides.

Specifications

Max. operating flow: 90 lt/min
 Max. flow per section: 70 lt/min
 Max. working pressure: 280 bar
 Min. stand-by & pilot pressure: 14 bar
 Spool stroke: +/- 6.5 mm
 Section width: 39 mm

P & T Ports: 3/4" - BSP
 Work ports (A & B): 1/2" - BSP

Fluid: Mineral based oil
 Fluid temperature range: -25°C / +95°C
 Optimum fluid viscosity range: 3<cSt<648
 Max. fluid contamination level: 19/16 (ISO 4406)

Seals: BUNA-N (Std) / Viton (optional)



Product Features and Benefits

Load-independent simultaneous control of two or more functions, within pump's flow saturation limits

Proportional flow control extended to 95% of spool stroke

Special "craning" spool configuration for overhung load control in conjunction with counterbalance valves

MLT/FD5 proportional actuators have built-in electronics requiring only variable voltage signals from a joystick

Internal closed loop position control configuration makes the valve spool achieving the desired position with accuracy levels approaching the performance of a servo-valve

Built-in CANbus interface working on SAE J1939 protocol

Non-feedback proportional and ON-OFF pilot pressure control actuators available

Electro-hydraulic, pressure compensated meter-in control of pump flow is available for cost-effective applications

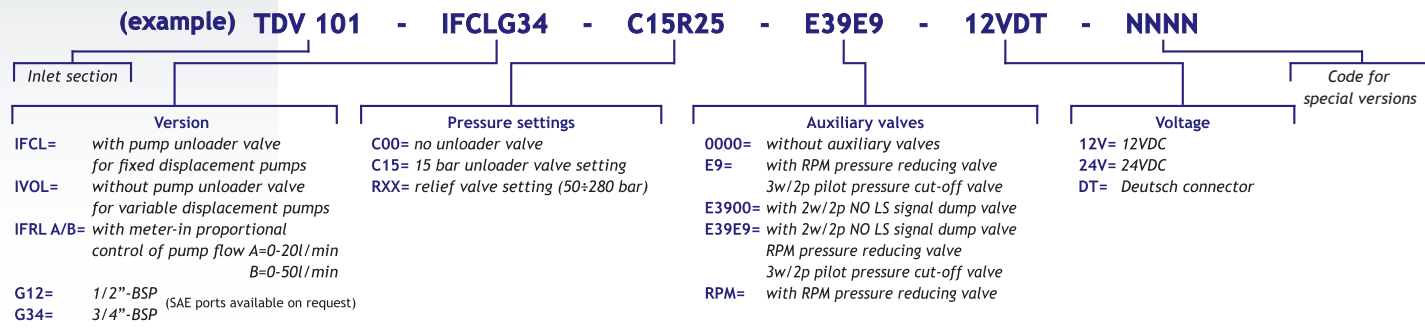


Directional Proportional Control Valve System TDV 100

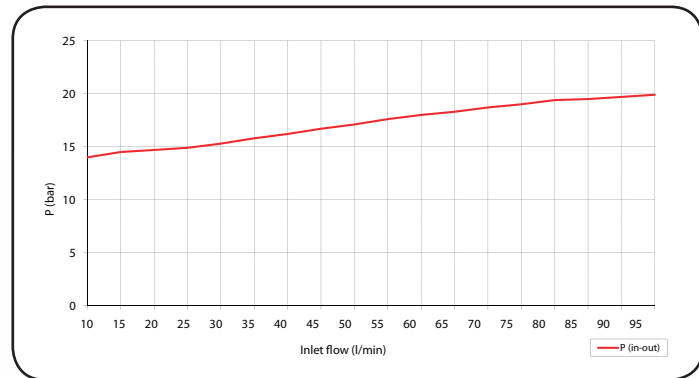
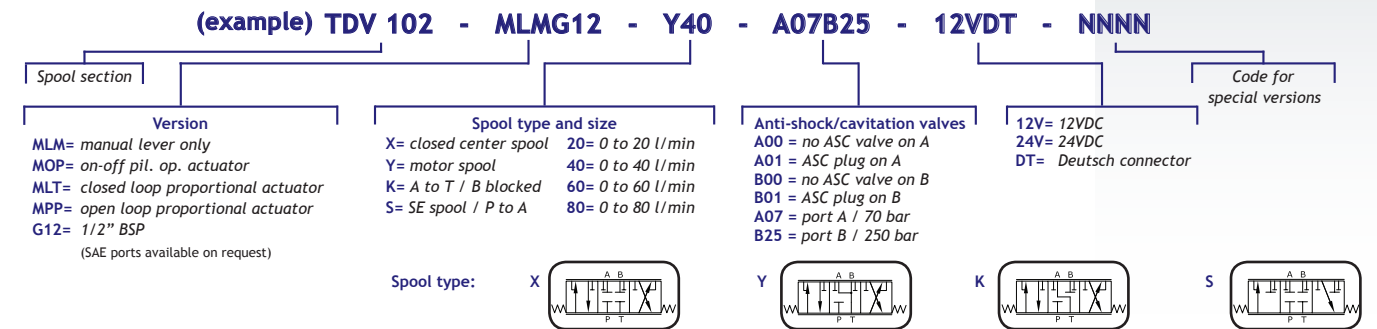
Inlet & End Sections Assembly Options TDV 100 Series

Spool Section Assembly Options TDV 100 Series

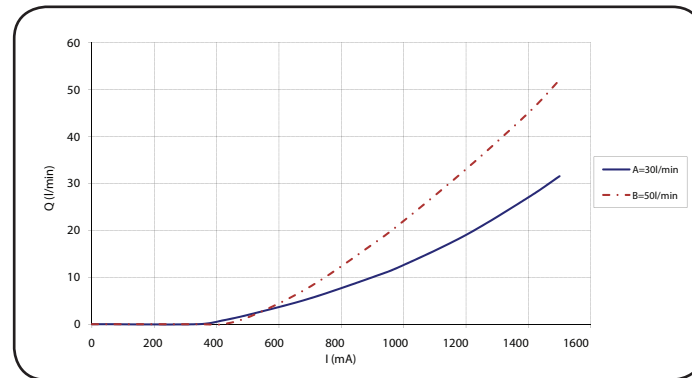
Inlet section designation



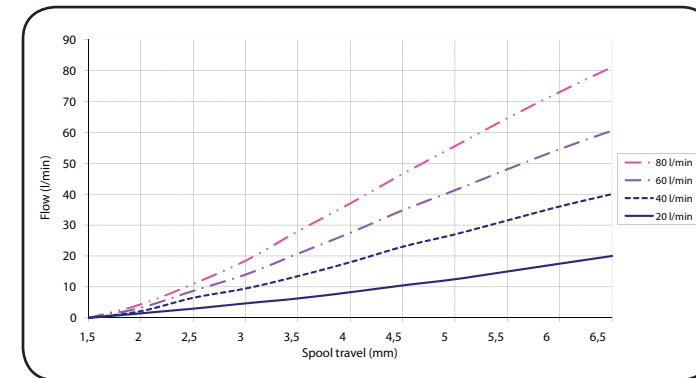
Spool section designation



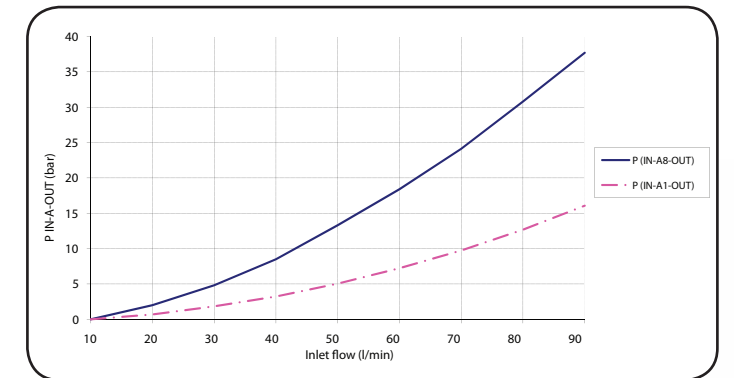
Inlet to outlet stand-by differential pressure (bar) vs. pump flow (l/min)



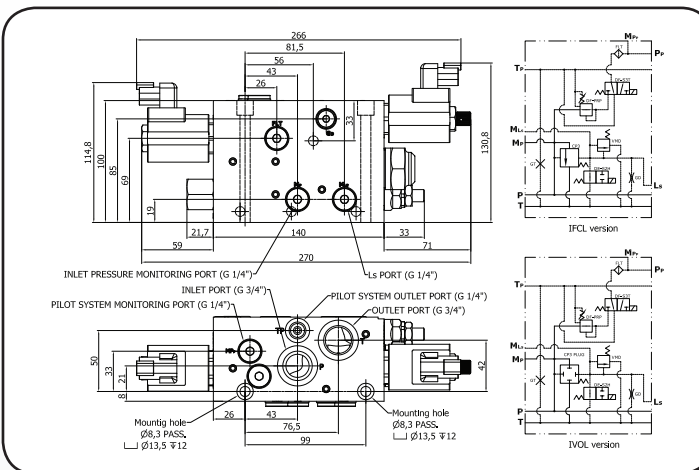
Meter-in proportional control characteristic (IFRL version)



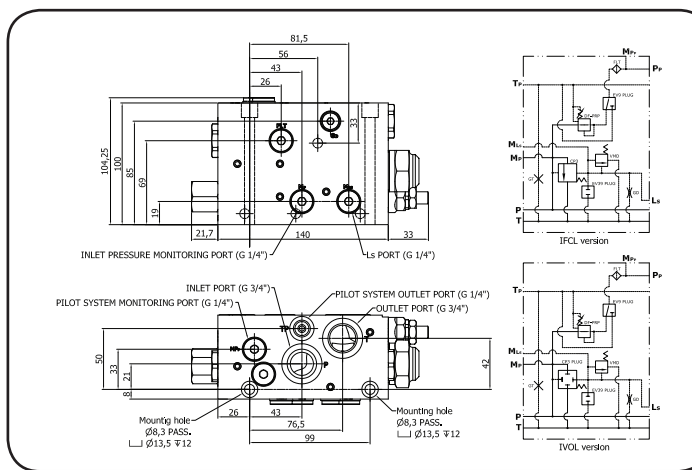
Work port flow (l/min) vs. spool travel (mm)



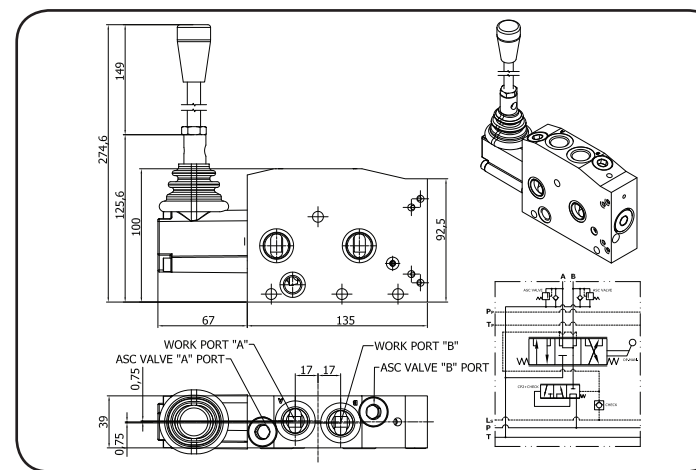
Inlet (P) to outlet (T) pressure drop at full flow through work port A&B of section 1 and 8



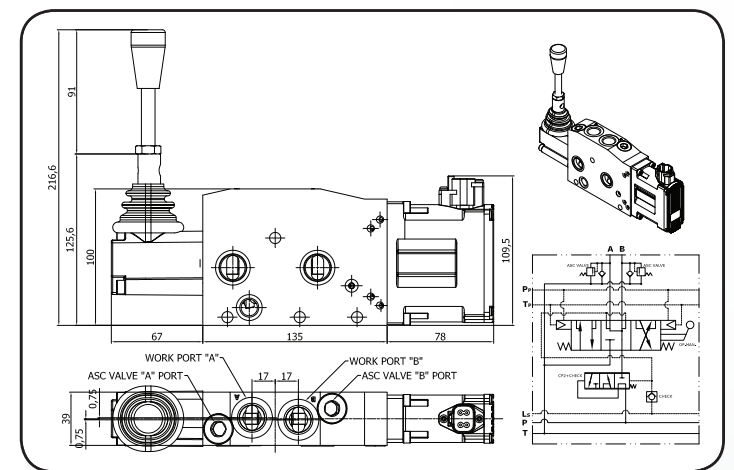
IFCL/IVOL inlet section with auxiliary valves



IFCL/IVOL inlet section without auxiliary valves



TDV 102 - MLM manual lever control

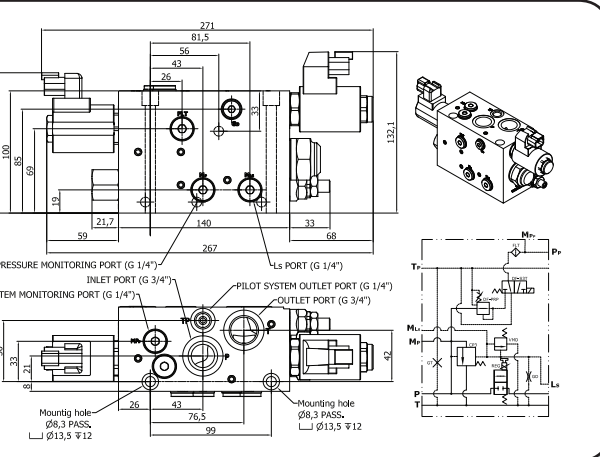
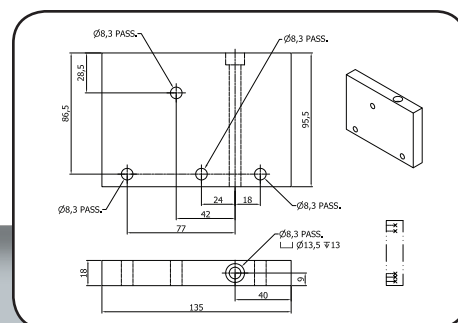


TDV 102 - MOP on-off type pilot pressure control

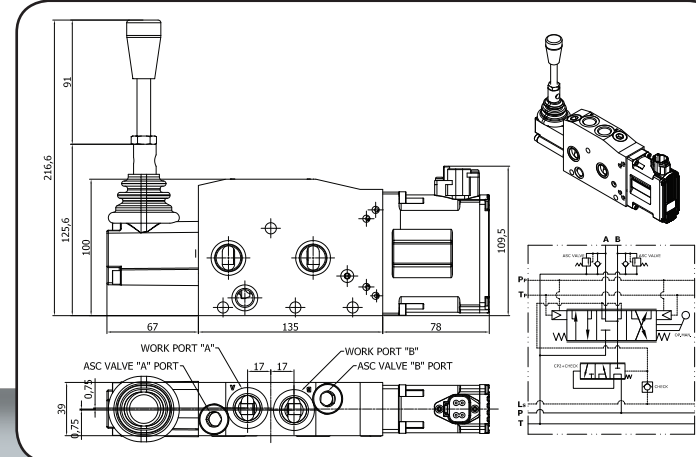
End section designation

TDV 103 - ERS

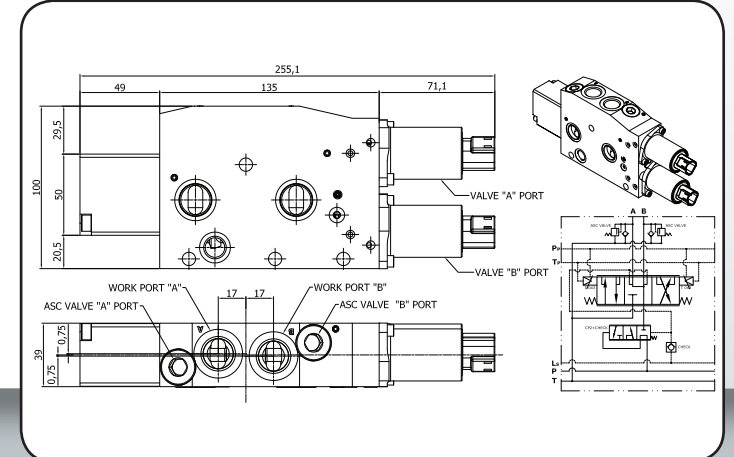
End section Blank / RH sided version



IFRL inlet section with meter-in proportional control of pump flow



TDV 102 - MLT closed loop proportional actuator with built-in electronics



TDV 102 - MPP open loop non feedback proportional pilot pressure control